

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A method of creating dot data representing recording states of ink dots in order to perform color printing, with a scanner print system utilizing main scanning and sub-scanning, by ejecting ink from nozzles of a print head during main scanning to thereby record ink dots on a printing medium, the method comprising:

(a) providing a print head that includes a plurality of nozzle groups that eject plural types of inks, respectively, each of the plurality of nozzle groups including a plurality of nozzles whose nozzle pitch in a sub scanning direction is larger than a pitch of print pixels;

(b) storing RGB color image data for a partial area of an image to be printed corresponding to a height of entire nozzles of the print head in the sub scanning direction that are used during each main scanning pass of color printing into a first buffer, but not the entirety of the RGB color image data for the image to be printed;

(c) selecting not the entirety but a part of the stored RGB color image data that represent a color image part on a plurality of printing-subject lines subject to recording of ink dots performed by the plurality of nozzle groups during a single main scan from the first buffer;

(d) performing a color conversion process on the selected RGB color image data and not on the entirety of the RGB color image data and a halftone process that uses a threshold pattern having a printing resolution on the converted color image data on the plurality of printing-subject lines to create dot data representing recording states of ink dots in print pixels on the selected printing-subject lines, and storing the dot data into a second buffer; and

(e) outputting the dot data from the second buffer,
wherein the RGB color image data has a resolution R_{data} which is lower than a printing resolution R_{print} , and
the selecting includes repeatedly selecting an identical pixel value of the RGB color image data (R_{print}/R_{data}) times for use in the halftone process.

2.-3. (canceled).

4. (previously presented): A method according to claim 1, wherein
in cases in which print pixel positions on each printing-subject line subject to recording of ink dots during the single main scan include recording-subject pixel positions that are subject to recording of ink dots and non recording-subject pixel positions that are not subject to recording of ink dots during the single main scan, the performing includes replacing values of dot data for the non recording-subject pixel positions among dot data on each printing-subject line with a value representing non-formation of dot.

5. (currently amended): A print control device for creating dot data representing recording states of ink dots in order to perform color printing, with a scanning print system utilizing main scanning and sub-scanning, by ejecting ink from nozzles of a print head during main scanning to thereby record ink dots on a printing medium, the print head having a plurality of nozzle groups that eject plural types of inks, respectively, each of the plurality of nozzle groups including a plurality of nozzles whose nozzle pitch in a sub scanning direction is larger than a pitch of print pixels, the print control device comprising:

a first processor for storing RGB color image data for a partial area of an image to be printed corresponding to a height of entire nozzles of the print head in the sub scanning direction that are used during each main scanning pass of color printing into a first buffer, but not the entirety of the RGB color image data for the image to be printed;

a second processor for selecting not the entirety but a part of the stored RGB color image data that represent a RGB color image part on a plurality of printing-subject lines subject to recording of ink dots performed by the plurality of nozzle groups during a single main scan from the first buffer;

a third processor for performing a color conversion process on the selected RGB color image data and not on the entirety of the RGB color image data and a halftone process that uses a threshold pattern having a printing resolution on the converted RGB color image data on the plurality of printing-subject lines to create dot data representing recording states of ink dots in print pixels on the selected printing-subject lines, and storing the dot data into a second buffer;
and

a fourth processor for outputting the dot data from the second buffer,

wherein the RGB color image data has a resolution R_{data} which is lower than a printing resolution R_{print} , and

the selecting includes repeatedly selecting an identical pixel value of the RGB color image data (R_{print}/R_{data}) times for use in the halftone process.

6.-7. (canceled).

8. (previously presented): A print control device according to claim 5, wherein in cases in which print pixel positions on each printing-subject line subject to recording of ink dots during the single main scan include recording-subject pixel positions that are subject to recording of ink dots and non recording-subject pixel positions that are not subject to recording of ink dots during the single main scan, the third processor performs replacing values of dot data for the non recording-subject pixel positions among dot data on each printing-subject line with a value representing non-formation of dot.<

9. (currently amended): A computer program product for creating dot data representing recording states of ink dots in order to perform color printing, with a scanning print system utilizing main scanning and sub-scanning, by ejecting ink from nozzles of a print head during main scanning to thereby record ink dots on a printing medium, the print head having a plurality of nozzle groups that eject plural types of inks, respectively, each of the plurality of nozzle groups including a plurality of nozzles whose nozzle pitch in a sub scanning direction is larger than a pitch of print pixels, the computer program product comprising:

a computer readable medium; and

a computer program stored on the computer readable medium, the computer program causing a computer to implement the functions of:

(a) storing RGB color image data for a partial area of an image to be printed corresponding to a height of entire nozzles of the print head in the sub scanning direction that are used during each main scanning pass of color printing into a first buffer, but not the entirety of the RGB color image data for the image to be printed;

(b) selecting not the entirety but a part of the stored RGB color image data that represent a RGB color image part on a plurality of printing-subject lines subject to recording of ink dots performed by the plurality of nozzle groups during a single main scan from the first buffer;

(c) performing a color conversion process on the selected RGB color image data and not on the entirety of the RGB color image data and a halftone process that uses a threshold pattern having a printing resolution on the converted RGB color image data on the plurality of printing-subject lines to create dot data representing recording states of ink dots in print pixels on the selected printing-subject lines, and storing the dot data into a second buffer; and

(d) outputting the dot data from the second buffer,

wherein the RGB color image data has a resolution R_{data} which is lower than a printing resolution R_{print} , and

the selecting includes repeatedly selecting an identical pixel value of the RGB color image data (R_{print}/R_{data}) times for use in the halftone process.

10.-11. (canceled).

12. (previously presented): A computer program product according to claim 9, wherein

in cases in which print pixel positions on each printing-subject line subject to recording of ink dots during the single main scan include recording-subject pixel positions that are subject to recording of ink dots and non recording-subject pixel positions that are not subject to recording of ink dots during the single main scan, the performing includes replacing values of

dot data for the non recording-subject pixel positions among dot data on each printing-subject
line with a value representing non-formation of dot.